For this Computer System Organisation Assignment, I have to build two PC systems which they are the following:

- Schoolwork PC - £400 limit
- Office PC - £900 limit

I have put the specifications and items details of each hardware and minimum hardware requirements for the Schoolwork PC

Hardware Details & Operating System Details For Schoolwork PC

- **Hard drive:**
  - 4.3 GB of hard drive size
  - Supports UDMA at 66MB/s
  - Fast access time 10.5ms

See Web-site: http://online.staktrading.com/cgi-bin/stakshop/19671444?tkGT2pKn;;158

Hard drive is used for storing data and programs. Hard Drive connects to the IDE connector on the motherboard. I recommend Seagate 4.3GB Hard drive for the Schoolwork PC.

- **RAM:**
  - 32MB of Memory
  - Plugs into 168Pin DIMM Memory Slot on the motherboard

See Page: 78 on Micro Computer Mart on 24th February 2000

- **Cache Memory:**
  - 128K of Cache Memory
  - Supplied with PII 466MHz Celeron A Processor

See Web-site: http://online.staktrading.com/cgi-bin/stakshop/search?wFKwtaY3;;613

- **CD-ROM:**
  - 52 speed CD-ROM
  - IDE Interface

See Page: 74 on Micro Computer Mart on 24th February 2000

- **Keyboard:**
- Plugs into PS/2 Keyboard Connector
- Compatible to Windows 98

See Page: 80 on Micro Computer Mart on 24th February 2000

Mouse:

- Easy to Use
- 2 Mouse Buttons

See Web Site: http://addons.co.uk/cgi-bin/browse.cgi?session=24873040&view=item&item=ms-1

- **Floppy Drive:**

  - Fits into 3.5" case
  - Stores up to 1.44MB

See Page: 78 on Micro Computer Mart on 24th February 2000

- **Sound Card:**

  - Plugs into PCI Slot
  - 64 bit Sound card

See Web Site: http://addons.co.uk/cgi-bin/browse.cgi?session=24873040&view=item&item=sc-1

- **Speakers:**

  - 140 Watt Speakers

See Web-site: http://addons.co.uk/cgi-bin/browse.cgi?session=24873040&view=item&item=sc-p1

- **Mini Tower Case:**

  - Supplied with Power Supply Unit
  - Fits onto any ATX Motherboards

See Web-site: http://addons.co.uk/cgi-bin/browse.cgi?session=24873040&view=item&item=cs-3

- **Processor Chip (CPU):**

  - Intel PII 466MHz Celeron A
  - Extras: 128K Cache PPGA Full Retail, Includes Fan And Slot 1 Converter Card

See Web Site: http://online.staktrading.com/cgi bin/stakshop/scan/sp=re…/se=19285077?dXwdtZLA;;32

- **Video Card:**

- Plugs into free AGP slot.
- 16MB of Powerful Memory

See Web Site: http://online.staktrading.com/cgi-bin/stakshop/15554500?wFKwtaY3;;436

- **Colour Monitor:**

  - 14" Colour Monitor

See Page: 170 on Micro Computer Mart on 24th February 2000

A colour monitor is an output device which it can be used for displaying the results (information or data) to the user, so that the user can see what any information or data (graphics) has been input.

I have choose the 14" SVGA Colour Monitor because it is very cheap and it good for the Schoolwork PC.

- **Motherboard:**

- CPU takes up to: PII 450, PII 600, Celeron 500
- Chipset: Intel BX
- Max memory: 786MB
- Expansion Slots: 5 PCI, 2 ISA, 1 AGP
- Addition Features: Win 98 Shutoff, IrDA

See Page: 16 from Simply Magazine inside Computer Shopper April 2000 Issue 146

I have choose this motherboard from Simply magazine because I think that is the best motherboard, as it can take a maximum memory of 786MB. Also it has 5 PCI slots, 2 ISA slots and 1 AGP slot for the graphics cards and it can Pentium II, PIII cartridges and Intel Celeron processor chip as well.

2) Windows 98

See Web-site: http://209.196.183.42/templates/software.cfm?ProductID=146

Minimum hardware requirements to run Windows 98 Second Edition

To use Microsoft Windows 98, you need a PC with:

- 486DX / 66MHz or higher processor
- 24MB of memory; more improves performance
- Available hard-disk space required:

  When installing Full Version:
  - When using FAT16 file system, typical installation requires 260MB of available hard-disk space, but may range between 210MB and 400MB, depending upon system configuration and options selected

- When using FAT32 file system, typical installation requires 210MB of available hard-disk space, but may range between 190MB and 305MB, depending upon system configuration and options selected

When installing Upgrade Version:

- Typical installation requires approximately 205MB available hard-disk space (includes 45MB average for backup files during installation) but may range between 140MB and 315MB (includes 75MB for back files during installation), depending upon system configuration and options selected
- CD-ROM or DVD-ROM drive
- VGA or higher-resolution monitor
- Microsoft Mouse or compatible pointing device.

I have chose this operating system for the schoolwork PC because it has USB support for simple plug-in and ready-to use expansion and it helps to keep the Schoolwork PC tuned with in-built automatic maintenance program and it is the latest operating system.

Component	**Manufacturer**	**Supplier**	**Price**
4.3GB Hard Drive	Seagate	STAK Trading	£49.00
52x IDE CD-ROM Drive	Eclipse Computer Supplies Ltd	Eclipse Computer Supplies Ltd	£24.00
PS/2 Windows 98 Keyboard	Lansdowne Systems Ltd	Lansdowne Systems Ltd	£2.90
PS/2 2 Button Mouse	Addons	Addons	£2.00
3.5” 1.44MB Floppy Drive	RL Supplies Ltd	RL Supplies Ltd	£7.90
PCI 64	Addons	Addons	£7.00
140 Watt PMPO Speakers	Addons	Addons	£5.00
Mini Tower ATX with ATX PSU	Eclipse Computer Supplies Ltd	Eclipse Computer Supplies Ltd	£16.00
PII 466MHz Celeron A Processor	Intel	STAK Trading	£75.00
A55 AGP 16MB AGP Graphics Card	Diamond	STAK Trading	£20.00
14" SVGA Colour Monitor	TR Computers	TR Computers	£35.00
MB1504 Motherboard	TMC	Simply	£66.99
32MB 168Pin PC100	RL Supplies Ltd	RL Supplies Ltd	£19.00
128K Cache	Intel	STAK Trading	Free
Fan	Intel	STAK Trading	Free
Software	**Manufacturer**	**Supplier**	**Price**
Microsoft Windows 98 v2	Microsoft	Software Savings Ltd	£69.00
Total			£398.79

As shown above, I have spent a total of £398.79 for the Schoolwork PC including the Processor, Windows 98 v2 operating system. Spending £1.21under the £400 limit.

I have put the specifications and items details of each hardware and selected operating system for the Office PC

Hardware Details & Operating System Details For Office PC

- **Hard Drive:**

- 13.3 GB of hard drive size
- Supports UDMA at 33/3MB sec or 66MB/s
- Fast access time 9.5ms
- 3 Year Warranty

See Page: 13 from Simply Magazine inside Computer Shopper April 2000 Issue 146

- **RAM:**

  - 128MB of Memory
  - Plugs into 168Pin DIMM Memory Slot on the motherboard

  See Web Site: http://online.staktrading.com/cgi-bin/stakshop/search?wFKwtaY3;;613

- **Cache Memory:**

  - 128K of Cache Memory
  - Supplied with PII 466MHz Celeron A Processor

See Web Site: http://online.staktrading.com/cgi-bin/stakshop/search?wFKwtaY3;;613

- **CD-ROM:**

  - 52 speed CD ROM Drive
  - Creative Labs Brand CD-ROM
  - IDE Interface

See Web Site: http://addons.co.uk/cgi-bin/browse.cgi?session=24873040&view=item&item=cd9300

- **Keyboard:**

  - One-Touch access to the Internet and more!
  - 10 Hot Keys
  - Detachable Palm rests
  - Quickly perform common tasks such as Cut, Copy, and Paste with the help of Control Key Shortcut labels.

See Web-site: http://online.staktrading.com/cgi-bin/stakshop/14660085?4iaIiLsc;;824

- **Mouse:**

  - Three Mouse Buttons
  - Compatible to Microsoft Windows 95, 98, NT
  - Easy to use

See Page: 19 from Simply Magazine inside Computer Shopper April 2000 Issue 146

- **Floppy Drive:**

    - Fits into 3.5” case
    - Stores up to 1.44MB

See Web-site: http://addons.co.uk/cgi-bin/browse.cgi?session=25254513&view=item&item=hd-q1

- **Tower Case:**

- Supplied with a Power Supply Unit (PSU)
- Fits onto any ATX motherboards
- 1 x 3.5” Floppy slots
- 5 x 5.25” Drive Slots.

See Web Site: http://addons.co.uk/cgi-bin/browse.cgi?session=24873040&view=item&item=cs-3

- **Processor Chip (CPU):**

    - Intel PII 500MHz Celeron A
    - Extras: 128K Cache PPGA Full Retail, Includes Fan And Slot 1 Converter Card

See Web-Site: http://online.staktrading.com/cgi-bin/stakshop/scan/sp=re…/se=19285077?dXwdtZLA;;32

- **Video Card:**

    - Plugs into free AGP slot.
    - 16MB of Powerful Memory

See Web Site: http://online.staktrading.com/cgi-bin/stakshop/15554500?wFKwtaY3;;436

- **Colour Monitor:**

    - 15” Colour Monitor
    - 0.28mm dot pitch
    - 1,024 x 768 maximum resolution

See Page: 25 from Simply Magazine inside Computer Shopper April 2000 Issue 146

- **Motherboard:**

- CPU takes up to: PII 233-450MHz, PIII 450-700MHz, Celeron 266-533MHz
- Chipset: Intel ®440BX chipset (82443BX and 82371EB)
- Max memory: 768MB MAX. (8, 16, 32, 64, 128,256MB SDRAM)
- Expansion Slots: 5 PCI, 2 ISA, 1 AGP
- Addition Features: Built-in IrDA TX/RX header

See Web-site: http://online.staktrading.com/cgi-bin/stakshop/18456540?wFKwtaY3;;845

- **Tape Drive:**
    - Internal Model
    - Stores up to 10 GB

See Web Site: http://www.addons.co.uk/cgi-bin/shop.cgi

2) Microsoft Windows NT 4.0 Workstation

See Web-site: http://209.196.183.42/templates/software.cfm?ProductID=13

Component	**Manufacturer**	**Supplier**	**Price**
HFD146/13.6GB	Fujitsu	Simply	£81.00
52x CD ROM Drive	Creative Labs	Addons	£27.00
MS Internet Keyboard 105 Key PS/2 W9x	Microsoft	STAK Trading	£17.00
3 Button Mouse MS Compatible	Microsoft	Simply	£4.99
Mitsubishi 1.44 3.5" Floppy Drive	Mitsubishi	Addons	£9.00
Full Tower ATX Case with PSU	Addons	Addons	£30.00
PII 500MHz Celeron A Processor	Intel	STAK Trading	£79.00
A55 AGP 16MB AGP Graphics Card	Diamond	STAK Trading	£20.00
15" Simply SVGA Monitor	Simply	Simply	£88.99
Be6 Slot 1 Motherboard	ABIT	STAK Trading	£79.00
128MB 168Pin PC100	Generic	STAK Trading	£89.00
128K Cache PPGA Full Retail	Intel	STAK Trading	Free
Fan	Intel	STAK Trading	Free
3COM Etherlink Card	Addons	Addons	£36.00
IOMEGA Internal 10 GB Ditto Max Pro	IOMEGA	Addons	£119.00
Software	**Manufacturer**	**Supplier**	**Price**
Microsoft Windows NT 4.0 Workstation	Microsoft	Software Savings Ltd	£80.00
Total			£759.98

As shown above, I have spent a total of £759.98 for the Office PC including the Tape drive, Windows NT 4.0 Workstation operating system. Spending £140.02 under the £900 limit.